WHAT IS CLAIMED IS:

1. A method of forming a semiconductor device, comprising:

forming a body region of a semiconductor substrate;

forming a drift region adjacent at least a portion of the body region, using a dopant;

forming a field oxide structure adjacent a portion of the drift region and a portion of a drain region, wherein the field oxide structure is located between a gate electrode region and the drain region and is spaced apart from the gate electrode region;

wherein atoms of the dopant accumulate adjacent a portion of the field oxide structure forming an intermediate-doped region adjacent a portion of the field oxide structure;

forming a gate oxide adjacent a portion of the body region; and

forming a gate electrode adjacent a portion of the gate oxide.

2. The method of Claim 1, wherein the dopant comprises phosphorous.

3. The method of Claim 1, wherein the intermediate-doped region has a higher doping concentration than a doping concentration of the drift region.

4. The method of Claim 1, further comprising forming a drain implant at the drain region, the drain implant having a higher doping concentration than a doping concentration of the intermediate-doped region.

5. The method of Claim 1, further comprising forming a buried layer (14) of the semiconductor substrate, wherein the buried layer is adjacent a portion of the body region.

6. The method of Claim 1, further comprising forming a local oxidation on silicon (LOCOS) isolation structure adjacent a portion of the drain region.

7. The method of Claim 5, wherein the LOCOS isolation structure is formed at approximately the same time as the field oxide structure.

8. The method of Claim 1, further comprising forming a spacer structure adjacent a portion of the gate electrode.

9. The method of Claim 1, further comprising forming a drain contact at the drain region, the drain contact operable to facilitate a flow of electric current through the semiconductor device.

10. A semiconductor device, comprising:

a body region of a semiconductor substrate;

a drift region adjacent at least a portion of the body region, the drift region comprising a dopant;

a field oxide structure adjacent a portion of the drift region and a portion of a drain region, wherein the field oxide structure is located between a gate electrode region and the drain region and is spaced apart from the gate electrode region;

an intermediate-doped region adjacent a portion of the field oxide structure, the intermediate-doped region comprising dopant atoms accumulated proximate the field oxide structure;

a gate oxide adjacent a portion of the body region; and

a gate electrode adjacent a portion of the gate oxide.

11. The semiconductor device of Claim 10, wherein the dopant comprises phosphorous.

12. The semiconductor device of Claim 10, wherein the intermediate-doped region has a higher doping concentration than a doping concentration of the drift region.

13. The semiconductor device of Claim 10, further comprising a drain implant at the drain region, the drain implant having a higher doping concentration than a doping concentration of the intermediate-doped region.

14. The semiconductor device of Claim 10, further comprising a buried layer of the semiconductor substrate, wherein the buried layer is adjacent a portion of the body region.

15. The semiconductor device of Claim 10, further comprising a local oxidation on silicon (LOCOS) isolation structure adjacent a portion of the drain region.

16. The semiconductor device of Claim 10, further comprising a spacer structure adjacent a portion of the gate electrode.

17. The semiconductor device of Claim 10, further comprising a drain contact at the drain region, the drain contact operable to facilitate a flow of electric current through the semiconductor device.

18. The semiconductor device of Claim 10, wherein a relationship between a doping concentration of the semiconductor device and a lateral distance from the drift region is generally linear.